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Quick Patient Information System using Uidai

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Abstract: ***In an emergency situation , health personnel often spend a lot of time trying to identify a patient's medical history and journals. In a medical emergency time is always a critical factor. How much easier would it be for medical personnel if a patient could provide all relevant information when needed?.Our system allows a patient to present all information about his or her situation, which would be relevant for medical personnel, like allergies, prescription drugs, illness and contact information to next of kin. patients can view and update their personal medical information ,our system is a comprehensive record-keeping for personal medical information using UIDAI. In healthcare sector it is the perfect replacement for unreliable paper records or various electronic systems that hold bits and pieces of the medical history. With our Medical system , any and all information that is important to patient is kept together in one place.***
Keywords: UIDAI, Healthcare, emergency,

I. INTRODUCTION

Developing quick patient information system would benefit the hospital management who can have effortless access to the data securely and more easily. Libraries keeps information on how many books are in the library, how many are been loaned out and to whom they are loaned and also the date and time this books were loaned or given out. School also keeps student's information or records. These records of students could include student's personal data such as name, sex, date of birth, level etc. Hospitals are not excluded in record keeping.

The records kept include patient data, which help to maintain patient's medical records. The medical records must have correctly all of the patient medical history. Physicians must maintain flawless records, because this document serves a number of purposes. It serves as a communication tool. As an important source of patient information, the medical record facilitates the transfer of data to other physician involved in an ongoing treatment of patient or the transfer of patient to another physician outside the office of the attending physician. It also facilitates the transfer of data to health care establishment or to any other organization or individual such as insurance company or employer.

Well- kept records usually reflect the level of care given to a patient by the physician. Therefore medical records can be used as an evaluation tool. The more complete the record, the better they will serve the physician and the patient in the event of any action. Every patient's medical record must include the following specific information. Patient's identity which includes the patient's first name, last name, sex, age, address, etc.

II. METHODOLOGY AND FRAMEWORK

One of the applications of UIDAI is to extract patient's information at the time of emergency from the database and maintain the authenticity of the data extracted. In healthcare sector extracting patients information using unique identity can save many lifes and it will also be helpful for the staff and the doctors of any particular hospital, this will allow the medical staff to rapidly start the required medication of the patient. This enhances patient safety and also reduces the amount of effort that the staff has to put in in diagnosing the problem at the time of emergency.

This project contains the following methodology.

A. Patient Personal Information

this module is used to retrieve the personal information that is used in the time of emergency. Personal details contain information regarding the person's name, age sex, habits of the person such as the smoking habit, drinking habit etc.It also contains the information regarding the emergency contacts that is needed to inform the dear and near ones. The personal information can only be updated by the patient. He can do this by providing the password that is user specific. By giving the password in the web browser he can update the personal information. The user only can update the information; no other person has the rights to access it.

B. Emergency Contacts

If the patient is not in the state of providing any kind of information at that point of time emergency contacts play an important role,

collected literature was classified into several categories based on the proposed research framework, which will be introduced in the next section. With the guide of this framework, we identify why UIDAI is attractive to healthcare, how it is applied in different areas, and what technologies are used in practice. Meanwhile, research papers that discuss the potential benefits as incentive factors in UIDAI adoption and barriers that impede UIDAI implementation are also categorized in this framework

C. Patient's Medical History

This section includes past medical history of the patient , is patient already going through any medication for any disease for eg. Asthama,depression,diabeties,any heart related problem etc

D. Medication and Dosage

If the patient is already going through any medication process then that information is given in this section along with medicenes and the quantity of dosage which is being given to the patient,all this information is provided in this section.

E. Lab Reports

In this section all reports of all the medical test of that particular patient is provided for eg. Blood sugar test, haemoglobin test, thyroid test etc.

F. Related Work

Although UIDAI technology is starting to make inroads into healthcare, there are some more fields that has been using unique identification like biometrics.

Biometric matching refers to the usage of Aadhaar Authentication for matching Aadhaar number and the biometric attributes of a resident in the CIDR to the biometric data submitted by the resident from an authentication device [1].

As per the UIDAI plan, people will be identified and issued AADHAAR numbers based on their demographic data (name, address, date of birth, etc.) and biometric data (photograph of face, image of iris and fingerprint) [2].

III. PROBLEM DESCRIPTION

In an emergency situation , health personnel often spend a lot of time trying to identify a patient's medical history and journals. In a medical emergency time is always a critical factor.

In the Emergency situation , there is only the Game of several minutes . If things works , going to live otherwise Die. For this type of Situation Our System works

Electronic medical records (EMRs) may easily alleviate the distress of most doctors and nurses working in today's care system. Besides improving the degree of data availability among physicians and patients, they certainly increase the traceability of numerous medical details so deeply buried in traditional records.

Instant access to patient information is key to lifesaving care, especially in the emergency room and intensive-care unit, where delays may mean the difference between life and death," Dr. Mark Smith said [3] . Currently, Emergency Medical Service (EMS) providers rely completely on personal and medical history information provided by patients or family members. It is common knowledge that stress, physical and mental discomfort prevent most patients and family members to impart vital medical information.

A. Significance of Problem in Real World

Microsoft's Feied, a pioneer in medical training computer programs and medical intelligence software, said physician collaboration is the critical element for improving health care. He offered an impassioned testimonial. An emergency room physician who estimates he treated 80,000 patients "with my own hands," Feied said the thing that stuck out as he looked back on his career was how many times he was put in a position of "guessing over and over," "flying solo," in an information vacuum. In situations where people "die right in front of you," he said he often felt he was "one data element away" from stopping a patient from dying [4].

B. Need of Quick Patient Information System

Now a day's hospitals are currently facing challenges of improving patient safety and reducing operational costs, which are often compromised by human and systemic errors. The Institute of Medicine (IOM) estimated that between 44,000 and 98,000 deaths per year were related to medical errors [5].

Some problems are identified as the common phenomena that lead to healthcare operation failures:

1) Medical Mistakes: Medical mistakes have become a leading cause of death, killing more people each year than AIDS or

airplane crashes [6] . Therefore need of medical information about that particular patient is very necessary at the time of emergency so as to help the doctors to start correct treatment rapidly.

2) *Increased Cost:* Now a day's Hospitals are actively seeking solutions to reduce the rising healthcare expenses as well as not adversely affecting patient satisfaction. If correct medication is not provided to the patient then it will increase the medication cost and patients health will also suffer.
3) *Inefficient Workflow:* Inefficient workflows exist in every hospital because of the difficulty in allocating resources in real time. For example, doctors and nurses wasted over 30 percent of their working time searching for or reading information about patients [7] . Most medical facilities practiced managing the large number of seriously injured patients expected during catastrophic events. During mass casualty events, as the demands on healthcare teams increase and the challenges faced by managers escalate, workflow bottlenecks begin to develop and system capacity decreases as well .

IV. BENEFITS AND BARRIERS

A. Benefits of Quick Patient Information System

Adoption of quick patient information system using UIDAI in healthcare will not only reduce the medication cost but it will also increase the efficiency to provide correct medication to the patients by providing the required information about the patient from a single source and very quickly ,use of this system will help in saving many precious lifes

1) *Time and Cost Saving:* Another critical challenge faced by healthcare is increased costs which can be reduced by several approaches. Doctors and nurses in their daily activities can save a lot of time searching for medical devices and can focus on their professional duties. It will also reduce the time taken to start proper medication.
2) *Improved Medical Process:* Hospitals want to improve the patient workflow and the operational process so as to save costs and enhance patient satisfaction. With all the required data at one place doctors and staff will be able to do work smoothly and efficiently.
3) *Others Benefits:* Improving resource utilization, enhancing patient satisfaction etc.

B. Barriers to Quick Patient Information System

Deploying quick patient information system using UIDAI in the healthcare industry for promoting patient safety is a complex issue since it involves technological, economical, social, and managerial factors.

1) *Technical Issues:* Technological limitations can impede its adoption in healthcare. Some of the technical problems that have been discovered are data structure, air-interface, and local interface, establishing common standards for healthcare systems.
2) *Cost:* costs include initial hardware and software costs and costs of maintenance and upgrade. In addition, UIDAI integration with back- end systems and data synchronization networks is needed to make RFID viable.
3) *Privacy Concerns:* It contains the unique identification number that associates with any type of personal information, such as patient name, gender, home address, and medical history. This information is highly mobile and sensitive. Thus, healthcare organizations should ensure neither personal nor confidential information is transmitted.

Such data should be stored in a secure server in compliance with the Health Insurance Portability and Accountability

V. IMPLEMENTATION DESIGN

VI. CONCLUSION

Computers are finding their way into every business, industry and research activity today. The use of computers is diverse, such as in entertainment, education, problem solving, research, personal management, among others. In hospitals, the process of maintaining the record of patients and employees working in the hospital, calculating bills, and so on, requires processing and record keeping in different departments. Keeping in view a strong need for managing the various important information fast and efficiently, Patient Information Management System (PIMS) has been designed and developed. Proper analysis and assessment of the developed system indicates an efficient, usable and reliable records-management system, which adequately meets the minimum expectations that were set for it initially. The application scope, though, could be widened to accommodate entire hospital records management. The system can also be further enhanced so that the patients themselves can be able to access their information in a secure manner for the purpose of greater doctor-patient transparency.

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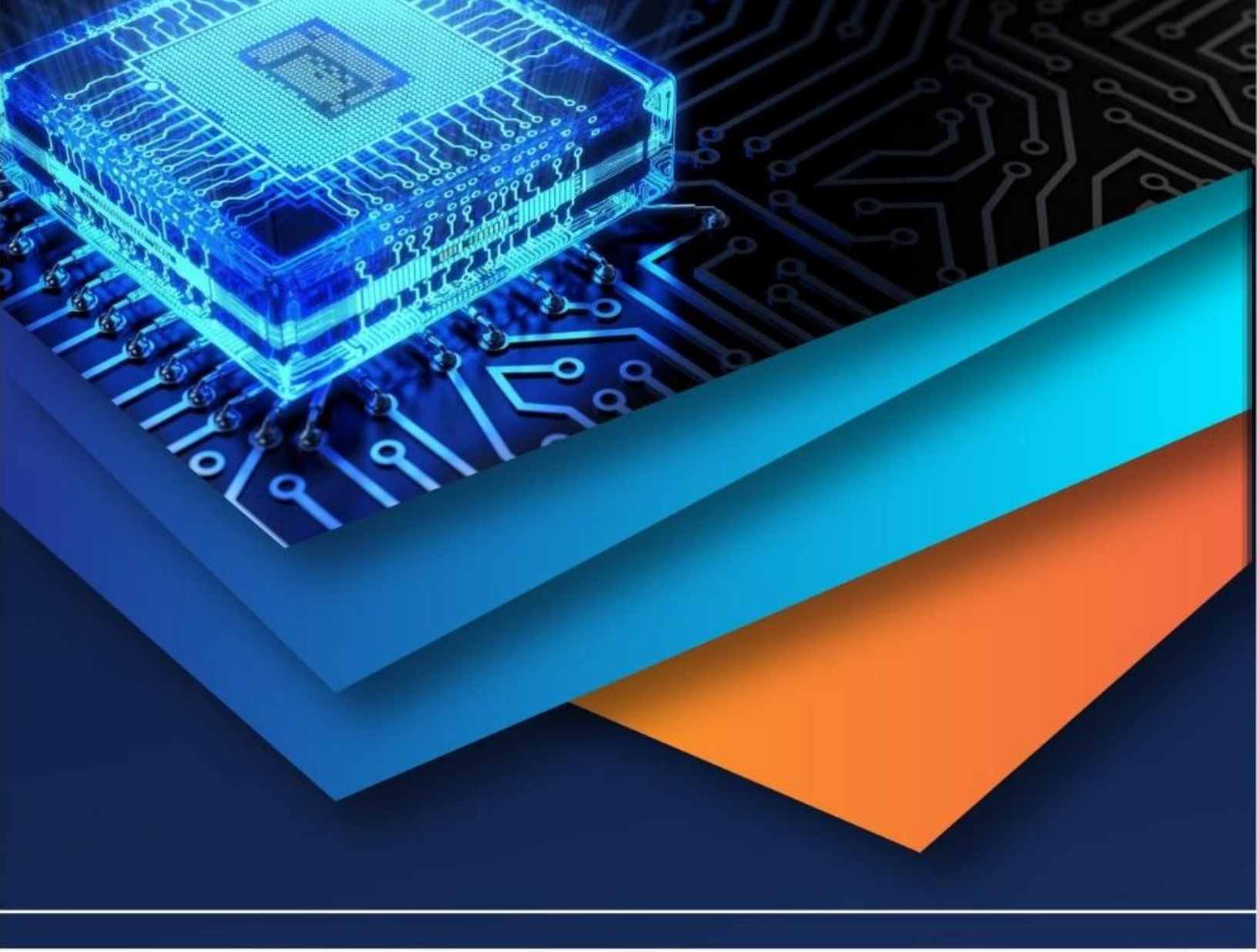

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